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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,719	01/12/2001	Richard A. Barry	S1415/7009 /SJH/DPM	2442
7590	10/04/2004		EXAMINER	
Daniel P. McLoughlin c/o Wolf, Greenfield & Sacks, P.C. 600 Atlantic Avenue Boston, MA 02210			LEB, CHI HO A	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/759,719	BARRY ET AL.
	Examiner Andrew Lee	Art Unit 2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 May 2001.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-111 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-8,17-29,38-50,61-69,73-83,87-97 and 101-111 is/are rejected.  
 7) Claim(s) 9-16,30-37,51-60,70-72,84-86 and 98-100 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>6-8</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Objections***

1. Claim 46 is objected to because of the following informalities:

Claim 46 should depend on Claim 45 and not claim 3. Claim 46 will be interpreted accordingly. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6, 7, 17-25, 27, 28, 38-46, 48, 49, 61-63, 65-69, 74-83, 88-97, 102-106, 108-110 are rejected under 35 U.S.C. 102(e) as being anticipated by Azizoglu et al U.S. Patent Number 6,430,201.

Re Claims 1, 22, 43, 65, 79, 93, 108-110, fig. 2 teaches line interface (first device) transmitting signals to adjacent line interface (a second device) wherein the interface includes a 8B/10B codec (encoder/decoder) 22-1 (a first block coding scheme) encoding K characters (signaling information as one or more first sequences of bits); and MUX/DuMuX 26 for transmitting the K character to the adjacent line interface (See col. 4, lines 38-62).

Re Claims 2, 23, 43, refer to Claim 1, wherein the adjacent line interface includes Codec for decoding and the DeMux the K character.

Re Claims 3, 4, 24, 25, 45, 46, 66, 67, 80, 81, 94, 95, refer to Claims 1, 2, wherein the GbEthernet (first protocol) protocol defines the physical layer.

Re Claims 6, 7, 27, 28, 48, 49, 68, 69, 82, 83, 96, 97, 8B/10B codec divides the signaling information according to 8 bits and then 10 bits (first and second sequences of bits).

Re Claims 17, 19, 38, 40, 61, 74, 76, 88, 90, 102, 104 refer to Claim 1, wherein fig. 2 supports SONET transport (first and second device of an optical transport network).

Re Claims 18, 20, 21, 39, 41, 42, 62, 63, 75, 77, 78, 89, 91, 92, 103, 105, 106, refer to Claim 17, wherein the SONET framer carries signaling information, hence inherently defined in the Optical Domain Service Interconnect.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 8, 26, 29, 47, 50, 64, 73, 87, 101, 107, 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azizoglu et al U.S. Patent Number 6,430,201.

Re Claims 5, 8, 26, 29, 47, 50, 73, 87, 101, '201 fails to explicitly teach, "encoding the signaling information such that each of the first sequences of bits is not a

sequence of bits defined by the first block coding scheme.”. It is known to one skilled that the 8B/10B encoding scheme has only 390 valid patterns for transmission characters out of a total of 1024 possible patterns, wherein 378 transmission characters are D characters and 12 K-characters used for control functions. Since, there are available patterns not specified by the 8B/10B encoding scheme, one skilled in the art would have been motivated to used unspecified characters available in the 8B/10B encoding scheme to enhance functional. Hence, by using the available characters patterns can be mapped to enable SONET signaling for network management. Therefore, it would have been obvious to one ordinary skilled to use “sequence of bits not defined by the first block coding scheme.”.

Re Claims 64, 107, 111, refer to Claim 1, wherein ‘201 fails to explicitly teach a computer program product comprising a computer readable medium that acts on the method of claim 1. However, One skilled in the art would have been motivated to store the functions of Claim 1 into a computer readable medium for portability.

***Allowable Subject Matter***

6. Claims 9-16, 30-37, 51-60, 70-72, 84-86, 98-100 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with Claims 1, 6, 7, 9; 22, 27, 28, 30; 43, 48, 49, 51, prior art fails to teach encoding each second sequence such that, for each of the first sequence, a number of bits of the first sequence having a first logical value (hamming weight) is either less than 4 or greater than 6.

In combination with Claims 65, 68, 69, 70; 79, 82, 83, 84; 93, 96, 97, 98, prior art fails to teach to determine a first value of a bit at a first predetermined position of the first sequence, to determine a second value of a second bit at a second predefined position of the first sequence, and to generate, from each first sequence of bits, at least part of one of the second sequences of bits based on the first value hamming weight and the second value hamming weight.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 571-272-3130. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3026. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AI *[Signature]*  
ANDY LEE  
9/28/04  
PATENT EXAMINER